

**Notice of Allowability**

Application No.

10/822,866

Examiner

Hana A. Sanei

Applicant(s)

TSUKAMOTO ET AL.

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to an Amendment filed on 6/29/07.
2. ☒ The allowed claim(s) is/are 1-3 and 6-28.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All   b) ☐ Some\*   c) ☐ None   of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

***Response to Amendment***

The Amendment, filed on 6/29/07, has been entered and acknowledged by the Examiner.

Cancellation of claims 4-5 has been entered.

Claims 1-3, 6-28 are pending in the instant application.

***Election/Restrictions***

Claims 4-5 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected method of manufacturing an LED lamp, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 1/25/06.

***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Allowable Subject Matter***

A. Claims 1-3, 6-14 are allowed over the prior art of record.

The following is an examiner's statement of reasons for allowance:

The prior art of record teaches a light emitting diode (hereinafter referred to as LED) comprising a substrate coated with a metal pattern formed as an electrically conducting portion including films of copper (Cu), nickel (Ni) and gold (Au) laminated successively in this order on the substrate; a resin frame member fixed onto the substrate through an adhesive agent; a light-emitting element fixed into a frame of the resin frame member on the substrate so as to be electrically connected to the metal

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pattern; a resist partially formed between the substrate and the resin frame member; and a light-transmissive resin packed in the frame of the resin frame member to seal the light emitting element with the light-transmissive resin.

However, the prior art of record neither shows nor suggests the resist being bonded onto a nickel-free or gold-free surface of the copper film of the metal pattern (the metal pattern including copper (Cu), nickel (Ni) and gold (Au) laminated successively in this order on the substrate) as set forth in Claim 1.

Claims 2-3, 6-14 are allowable because of their dependency status from Claim 1.

B. Claims 15-21, 23, 25 are allowed over the prior art of record.

The following is an examiner's statement of reasons for allowance:

The prior art of record teaches a light-emitting diode (LED) lamp comprising: a metal pattern formed on a substrate and comprising a copper layer and a nickel layer formed on a surface of said copper layer; a resist layer bonded on said copper layer; a light-emitting element formed on said substrate and electrically connected to said metal pattern; and a frame member formed outside said light-emitting element, at least a portion of said frame member being formed on said resist layer.

However, the prior art of record neither shows nor suggests that the resist layer is directly bonded to said surface of said copper layer as set forth in Claim 15.

Claims 16-21, 23, 25 are allowable because of their dependency status from claim 15.

C. Claims 22, 24 are allowed over the prior art of record.

The following is an examiner's statement of reasons for allowance:

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The prior art of record teaches a lamp structure for a light-emitting element, said lamp structure comprising: a substrate on which said light-emitting element is mounted; a metal pattern formed on said substrate and comprising a copper layer and a nickel layer formed on a surface of said copper layer; a resist layer bonded to said copper layer; and a frame member formed outside said light-emitting element, at least a portion of said frame member being formed on said resist layer.

However, the prior art of record neither shows nor suggests that the resist layer is directly bonded to said a surface of said copper layer as set forth in Claim 22.

Claim 24 is allowable because of their dependency status from claim 22.

Q. Claims 26-28 are allowed over the prior art of record.

The following is an examiner's statement of reasons for allowance:

The prior art of record teaches a light-emitting diode (LED) lamp comprising: a metal pattern formed on a substrate and comprising a copper layer and a plating layer laminated on a surface of said copper layer; a resist layer bonded to said copper layer; a light-emitting element formed on said substrate and electrically connected to said metal pattern; and a frame member formed outside said light-emitting element, at least a portion of said flame member being formed on said resist layer.

However, the prior art of record neither shows nor suggests that the resist layer directly bonded to said surface of said copper layer as set forth in Claim 26.

Claims 27-28 are allowable because of their dependency status from claim 26.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

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accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Other Prior Art Cited***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

US 6180962 to Ishinaga

US 5962917 to Moriyama

US 5612512 to Wakamatsu et al

US 6377292 to Shimizu et al

US 5298768 to Okazaki et al

US 5729437 to Hashimoto

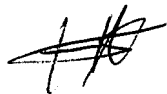
***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hana A. Sanei whose telephone number is (571) 272-8654. The examiner can normally be reached on Monday- Friday, 9 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Examiner  
Hana A. Sanei

**Joseph Williams**  
**Primary Examiner**